Abstract of the Invention

Ultra smooth as-deposited composite nickel coatings for use in an information storage system are provided. The composite nickel coatings include an electrolessly deposited nickel layer formed on a sputter deposited nickel layer. The composite nickel coatings have an as-deposited surface roughness of less than about 10 Å. Embodiments include formation of the composite nickel coating on a disk, followed by deposition of an underlayer and magnetic layer thereon to form a magnetic recording medium.